

To be properly prepared, a patient should have one ounce of castor oil on each of the two nights preceding the examination, and an enema the same morning about four hours before the examination. It is desirable that the enema should contain from $\frac{1}{2}$ to 1 ounce of alum to one quart of water. The patient should be without food for 24 hours, but if he will not submit to this, have him on a liquid diet, avoiding mineral waters and milk. By following this procedure the resistance to the penetrating rays is lessened and the interference of shadows of faecal masses obviated.

DIAGNOSIS.

In uroröntgenology special precautions must be taken to avoid errors, as there are many extra-urinary bodies which may be mistaken for urinary calculi. Among these are:—

- (1) Phleboliths and pelvic blotches.
- (2) Calcareous glands.
- (3) Tubercular glands in the mesentery.
- (4) Calcified plates in the arterial wall.
- (5) Calcified portions of the costal cartilage.
- (6) Foreign bodies in the alimentary canal.
- (7) Biliary calculi.
- (8). Prostatic calculi.
- (9) Calcareous cyst of the kidney.
- (10) Papilloma of the skin in the lumbar region.
- (11) Appendicular concretions and enteroliths.
- (12) One has recently heard of a case where a shadow lying in the line of the ureter and diagnosed as calculus, proved, on operation, to be an immature tooth contained in a dermoid cyst.

The presence of bismuth, or iron salts will, as a rule, be eliminated by proper preparation of the patient.

For the identification of these shadows, one cannot always rely on subjective symptoms, and even a negative urinalysis does not necessarily exclude stone.

There are times when the cystoscope, the ureteral catheter or bougie, or the uretero-pyelogram are indispensable aids to the roentgen diagnosis.

SYMPTOMS.

The similarity of subjective symptoms, which not infrequently occurs, between urinary calculus and other abdominal conditions, is so frequently noted in the roentgen laboratory, that one cannot help but feel, that clinical data alone, are insufficient for the diagnosis of many cases of urinary calculi. With the possible exception of the actual finding of the stone in the urine we cannot be absolutely convinced that we are dealing with a nephritic calculus, if there is one or many, or of their